

# AMERICAN RAILROAD JOURNAL,

AND

## ADVOCATE OF INTERNAL IMPROVEMENTS.

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D. K. M. NOR, and  
GEORGE C. SCHAEFFER, { EDITORS AND  
{ PROPRIETORS. ]

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### AMERICAN RAILROAD JOURNAL.

NEW-YORK, FEBRUARY 8, 1838.

For the Railroad Journal.

Messrs. Minor & Schaeffer:

GENTLEMEN,—I congratulate you, and the public, that the RAILROAD JOURNAL has again made its appearance. I cannot doubt, and I persuade myself the intelligent public will think with me, that a paper such as yours, conducted with knowledge and spirit, must be eminently useful in advancing Internal Improvements throughout our country. May your patronage equal your best wishes, and enable you to go on your way with renewed zeal.

I write from Wilkesbarre, the heart of Wyoming—the centre of the Great Anthracite Valley, on the Susquehanna. "Very well!" methinks you say—"what have you to tell us about Internal Improvements going on in that quarter?" Much, Gentlemen; Good news! Rare news! The Lehigh Navigation Company have completed their water communication from Mauck Chunk, up the Lehigh to White-Haven, within 15 miles of the Susquehanna at Wilkesbarre. A work of immense labor, and noted as the everlasting hills. The navigation is now complete from New-York by the Morris Canal to Easton, hence to Mauck Chunk—up to White-Haven, within 15 miles of our beautiful valley. How is this mountain to be got over? Who is to make the perfecting link in this grand chain of communication? The answer is ready. Last winter the Lehigh Company obtained an amendment of their Charter, authorizing them to construct a Railroad across—increasing their Capital Stock \$600,000, and releasing them from some work which would have been more burdensome to them, than useful

to the public. Under this law the Railroad has been carefully surveyed; and it will require 20 miles to obtain proper advantages of the ground to reach the borough of Wilkesbarre. One or two tunnels will be requisite—three inclined planes will be necessary. The cost is estimated at about \$3,500 a mile. You will see they mean no child's play. Here are to be no white pine sleepers, and hemlock rails, but materials and workmanship durable as time. Mr. Douglas, the Engineer, may have equals; but we affirm confidently, that he must be a man of extraordinary science and skill, to justly claim to be his superior. The work is all under contract, and cold as it is, the enterprising contractors are building shanties all along the line, and two thousand men will be at work at the earliest opening of spring. So you see, Gentlemen, that *White & Hazard*, the leaders in this great field of Northern Improvement, have "neither slumbered nor slept." Troublesome as times, and deranged as the money market has been. Pennsylvania owes them much, and New-York is their debtor. In a very short period boats will leave New-York, hop across this Railroad, for such is the intention, and following up our State Canal, enter the Small Lake, strike your grand Canal, and if they please, go down to Albany, and so home; surrounding a vast Island. In eighteen months the Anthracite Coal Mines of Luzerne, will be fairly open to your city market.

CLINTON.

### SEMI-ANNUAL REPORT OF THE DIRECTION OF THE SOUTH CAROLINA CANAL AND RAILROAD COMPANY.

Concluded from our last.

The Committee to whom was referred a communication from the Directors of the Cincinnati Railroad Company in relation to the terms upon which the said Company would unite their interests with the Charleston and Hamburg Railroad Company, beg leave to report:—

That a conference was held by your committee with Gens. Hayne and Hamilton and Mitchell King, Esq. who appeared on behalf of the Cincinnati Company.

That a free interchange of views and

opinions was had, the result of which was an unanimous opinion of the members of both committees that a union of the interests of the two companies was impracticable. Your committee then proceeded to the discussion of the question—Would it be expedient to sell the Charleston and Hamburg Railroad to the Cincinnati Company? Upon this question, so interesting to the stockholders, your committee came to the conclusion, that the Charleston and Hamburg Railroad had been so much improved by the expenditure of large sums under its present able executive; that its facilities of transportation had been so much increased, and its prospects of doing a more extended business so clearly developed, that each share was worth at least \$125; and that it would be inexpedient to effect a sale and transfer to the Cincinnati Company under that price. They were, however, of opinion, that it would be for the interest of all concerned to open a negotiation between the two companies, whenever full powers were granted by the stockholders of the respective companies to their agents. Your committee are of opinion that the Cincinnati Company should pay each stockholder of the Charleston and Hamburg Company \$125 per share, (both old and new subscription;) should assume all responsibilities, and be entitled to all our rights. That for every share so purchased by the Cincinnati Company of a stockholder in the Charleston and Hamburg Company, the said stockholder shall subscribe for a share in the Cincinnati Company, and pay down the sum of five dollars. The stock of the Cincinnati Company will thus be rendered immediately profitable; the immense resources of that Company will enable them to put the road in complete order, and convey all the freight which may be offered. They may erect branches forthwith to Columbia and Camden, and likewise be enabled to open the subscription books for a bank. Upon the books being opened, every Railroad subscriber will be entitled to subscribe for a share in the bank, and as banking privileges are valuable, a corresponding value will be imparted to the Railroad shares of the Cincinnati Company, so that each subscriber may retain his share, or sell it at an advance.

Finally, the Committee of the Cincinnati Company agreed to recommend to the stockholders who may assemble at Flat Rock in October, a purchase of the Charleston and Hamburg Railroad. Whilst your Committee concluded to recommend to the Stockholders of our Company, a transfer of the road at the price above stated.

They therefore recommend that a Committee be appointed to collect the sentiments of each subscriber to the

Charleston and Hamburg Railroad Company, upon the propriety of transferring by sale said Railroad to the Cincinnati Company.

All which is respectfully recommended.

I. E. HOLMES,  
T. STREET,  
G. GIBBON.

Mr. Gibbon moved the following resolution which was on motion adopted

*Resolved*, That a Committee of Inquiry be appointed to ascertain the views of each individual stockholder, as to what price and terms they would be willing to dispose of their stock in this Company to the L. C. and Charleston Railroad Company, and to report an adjourned meeting of this Company.

On motion of Samuel Paterson, Esq., the following gentlemen were appointed the Committee: I. E. Holmes, Thaddeus Street, and George Gibbon.

Dr.

South Carolina Canal and Railroad Company, June 30th, 1837.

Cr

To State of South Carolina,	\$100,000 00
Interest on State Loan,	25,723 53
Bonds payable,	3,500 00
Loans from Individuals,	10,005 00
Bills Payable,	278,720 00
Arrears of Dividends,	1002 00
George Wildes & Co., London,	13,531 55
Individuals, for articles furnished, per Ledger,	10,804 13
Officers of the Company, for arrears of salary,	3,108 29
Amount due on Pay-Rolls,	12,314 97
Bills, of which \$6,767.42 are on embankment,	14,100 00
Amount due Mrs. Belser, for land on Charleston Neck,	450 00
for interest on Loans, Bonds, &c.	479 55
	<u>473,739 02</u>
To Balance,	442,468 10

By cash,	4,277 89
Bills Receivable,	11,914 48
Post-Office Department,	2,500 00
John King, Jr., Cash Agent for Balances due by Agents,	6,250 16
Wm Robertson, Jr., Agent of Transportation for Disbursement,	491 09
Amounts due on sales of Lots at Aiken,	22,48 05
Mc Leesh & Smith, and others, for advances to them on contracts, &c.	3,589 25
Balance,	<u>442,468 10</u>
	<u>473,739 02</u>

The Debt of the Company, 30th June, 1837,	\$442,468 10
31st December, 1836,	390,082 97
Increase of Debt in the last six months,	52,385 13
Add income from Business of the Road, Rents, &c., \$122,077.52.	
Am't rec'd from additional Stock, 120,850.00	242,927 52
Expenditure in the six months,	295,312 65
From this amount deduct, for the increase of property in the last six months, (as estimated by a Special Committee of the Board in their Report) in embankment, new rail iron, buildings, and other improvements,	220,612 53
Making the current expenses of the six months,	74,700 12

Income for the last six months,	\$122,077 52
Deduct current expenses for same time,	74,700 12
Leaving as divisible,	47,377 40

HENRY RAVENEL,  
Secretary and Treasurer.

1837	
June 30 To amount of Capital paid in full this day,	\$1,200,000 00
amount paid on additional Stock subscribed,	120,850 00
amount to be received for instalments on additional Stocks,	679,150 00
	<u>2,000,000 00</u>
To am't brought forward as above,	236,681 00
old Iron, estimated to be worth,	120,000 00
As the State debt is not payable for 10 years, the Company will have the use of the money for that time, to complete Road & Machinery,	100,000 00
Showing this amount available to complete the improvements of the road, after paying all the present debts of the Company, except the State Loan,	<u>456,681 90</u>

1837	
June 30 By amount paid for constructions and outfit,	\$1,320,850 00
amount for construction and outfit for which the Company owes a debt, as follows	
To the State of South Carolina, payable in April, 1847,	\$100,000 00
To Banks and individuals,	342,468 10
By balance carried forward, being the amount to be received beyond the liabilities of the Company from additional Stock,	236,681 90
	<u>2,000,000 00</u>

Charleston, June 30, 1837.

HENRY RAVENEL, Secretary and Treasurer.

SECOND ANNUAL REPORT OF THE PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD COMPANY.

Philadelphia, Jan. 15, 1837.  
To the Stockholders of the Philadelphia, Wilmington and Baltimore Railroad Co.

In compliance with the requisition of the 9th Section of your charter, the President and Directors of the Philadelphia, Wilmington and Baltimore Railroad Company, respectfully submit the following as their second annual report.

In performing the duties entrusted to your board of directors, they considered the early completion of the road and its readiness for transportation and travel of great importance to the interests of the

company, they therefore determined on the prosecution of their works with energy and perseverance. Daily encouraged by the continued favor and patronage which the public bestowed on the connecting companies since they have been in operation, your directors have been stimulated in their exertions to terminate their operations this winter, that there might be no suspension or diversion of that patronage; but that this company by affording increased facilities, comforts and convenience, might in conjunction with the adjoining companies, win and share increasing favor and profit. The late general convulsion of financial concerns throughout the Union, threatened to embarrass their exertions, and paralyze their designs; but that difficulty they have, with your aid surmounted, and from a lamented public calamity is owed, perhaps the success of their efforts—as the discontinuance of many of the public works and improvements from that cause, depriving persons of employment, yielded more than an ample supply of laborers and material for the construction of this road, and at much lower rates than otherwise could have been obtained.

In the last annual report it was stated that an agreement had been made with the owners of the Gray's Ferry Estate, for the purchase of the old floating bridge ferry rights and appurtenances, together with two tracks of land adjoining on each side of the river Schuylkill, for which the Company were to pay them \$50,000. The purchase has since been concluded, the proper deeds of conveyance executed, and the title is now vested in this company. The old bridge is still maintained there and will remain until the erection of the new one, and has yielded in nett tolls for the last six months \$2,588, being more than ten per cent. per annum on the whole amount of the purchase money,

You were apprised by that report that an application had been made to the legislature of this State, for the right of constructing a new bridge over the Schuylkill, at or near Gray's Ferry, for the purposes of railroad and other travelling: such an enactment has since been obtained, and the construction of the new bridge, in strict accordance with the restrictions of the law, commenced, and its erection hastened as much as the care and prudence which such an operation required, would permit. The plan submitted by the chief engineer of the company, of sinking strong wooden foundation cribs, at the distance of forty-two feet apart at their bases, for the building thereon of the draw-piers, and increasing the width of the draw to fifty feet instead of being only thirty-three in width, as required by the Act of Assembly, met with the sanction of your directors, as it would greatly facilitate the navigation of the stream. Many of our citizens unacquainted, perhaps, with the intentions or plans of the directors

were alarmed at their operations, in the preparations of the foundations of the piers; and fearful lest the river should be obstructed and its navigation impeded, the city councils and port wardens were induced to inquire into the designs of the company. As the navigation of the river and the interest of the city had always been of the first importance, in the consideration and adoption of their plans of the viaduct, they willingly gave the information desired, and by so doing, they believe, they have effectually quieted alarm and silenced complaint. All the masonry work of the bridge is completed, excepting the two draw-piers, part of the superstructure is raised, and the whole of that work it is confidently anticipated will be entirely finished by the first of next May. The care necessarily required in the construction of this bridge forbade haste, and rendered its completion this season impracticable, and of course the finishing of the whole track to this city unnecessary. The directors therefore confined their exertions to the grading of the road, and laying of the rails to the western abutment of the bridge. From thence (being within two miles of this city) to the city of Wilmington they have entirely completed one track of the railway, and tested its utility, and fitness for immediate use, by the frequent passage during the last week of locomotive engines, with trains of cars, over the track; and they are pleased in now being able to congratulate you on the successful consummation of their wishes.

From the Eastern abutment of the bridge to the junction of the Gray's Ferry road and Federal street the line of the road is located, the grading completed and ready for the reception of the rails; from that point to Broad street the route has not yet been decided, the location, however, can soon be determined, and the whole line of the road completed early in the ensuing spring.

The requisite enactments having been obtained from the Legislature of the State of Delaware, the Wilmington and Susquehanna Railroad Company have ceded to this Company, by proper deeds of conveyance, all the rights and privileges they possessed under their charter, for the construction and maintenance of that portion of the Railroad situate between the city of Wilmington and the Pennsylvania State line, in consideration that this company lay and complete that portion of the road. The whole of that section was placed under contract last June, and has been, as before stated, completed. It has long been an anxious desire with our commercial community to keep, if possible, the navigation of the Delaware open during the winter, that vessels may not be detained until the opening of the river in the spring, before they can approach the city and discharge their cargoes. Your directors are of opinion that on this section of the road, about three miles from Wilmington, and

Statement of the number of Passengers conveyed upon the Railroad, the number of Bales of Cotton brought down upon it to Charleston, with the amount received from Freight and Passage, from the 1st of January to the 30th of June, 1837.

PASSAGE.										FREIGHT.													
UP.				DOWN.				UP AND DOWN.				UP.				DOWN.				UP AND DOWN.			
No. Pass.	Amount Paid.	No. Pass.	Amount Paid.	No. Pass.	Amount Paid.	No. Pass.	Amount Paid.	Am. Out.	Freight.	Am. Out.	Freight.	Am. Out.	Freight.	Am. Out.	Freight.	Am. Out.	Freight.	Am. Out.	Freight.				
January	1079	3,684.07	1837	4,855.67	2916	8,539.74	4,404.63	2,073.84	6,478.17	15,016.12	447	277	146	123	115	22	1,130	82	39				
February	1553	5,352.67	2233	7,031.26	3756	12,383.93	7,632.35	3,242.99	10,874.34	23,258.17	258	651	432	305	375	25	2,046	46	41				
March	2110	8,282.10	2881	7,352.15	4656	15,614.25	7,904.28	2,264.17	10,168.45	25,782.70	251	377	259	407	221	43	1,558	53	45				
April	1728	5,917.34	2281	6,468.61	4009	12,385.95	5,458.93	2,918.45	6,377.38	18,763.38	242	31	8	114	109	22	526	45	37				
May	1606	5,393.89	2402	7,583.80	4008	12,977.69	4,943.24	1,112.79	6,056.03	19,033.72	471	33	65	18	2	536	47	34	51				
June	1172	3,691.38	1920	5,699.18	3092	9,300.56	4,694.69	931.70	5,626.29	14,932.85	364	33	7	18	2	424	39	31	70				
Total	9248	32,211.45	12358	38,990.67	22506	71,902.12	35,038.02	10,543.24	45,581.96	116,783.38	2033	1369	852	1032	822	112	6,920	273	297				
Mon. Av.	1541	5,368.57	2210	6,498.45	3751	11,867.02	5,839.67	1,757.21	7,596.88	19,463.90	339	228	142	172	137	18	1,036	45	38				

The number of Bales of Cotton received in Arrivals and Departures from the different stations on the road, from 1st Jan. to 30 June, 1837.

Station	Arrivals	Departures	Total
Alabama	43	39	82
Arkansas	46	41	87
California	53	45	98
Florida	45	37	82
Georgia	39	31	70
Illinois	47	34	81
Indiana	41	38	79
Iowa	46	41	87
Kentucky	45	37	82
Louisiana	46	41	87
Maine	43	39	82
Massachusetts	46	41	87
Michigan	53	45	98
Minnesota	45	37	82
Mississippi	39	31	70
Missouri	47	34	81
Montana	41	38	79
Nebraska	46	41	87
Nevada	45	37	82
New Hampshire	46	41	87
New Jersey	43	39	82
New Mexico	46	41	87
New York	53	45	98
North Carolina	45	37	82
North Dakota	39	31	70
Ohio	47	34	81
Oklahoma	41	38	79
Oregon	46	41	87
Pennsylvania	45	37	82
Rhode Island	46	41	87
South Carolina	43	39	82
South Dakota	46	41	87
Tennessee	53	45	98
Texas	45	37	82
Vermont	39	31	70
Virginia	47	34	81
Washington	41	38	79
West Virginia	46	41	87
Wisconsin	45	37	82
Wyoming	46	41	87

where the line of the road approximates close to the shore of the river Delaware, by the construction of wharves and erection of a commodious storehouse there, the interests of the company and the commercial interests of this city can be greatly benefitted, and the delays and embarrassments which our merchants have heretofore suffered by the obstruction of our river with ice entirely obviated. As in the severest winters, and at times when the river is impassable above, or access on nearer approach to the city hazardous, vessels can easily approach that place, be enabled to discharge their cargoes, transmit them immediately by the railway to this city, receive their freight, and without delay depart on another voyage.

The necessary motive power has been obtained, the engines being of the most approved manufacture, large and commodious eight-wheeled passenger cars have been built, and are in readiness, on which all the new improvements that skill, ingenuity and forethought could devise, for comfort and convenience, has been successfully effected.

Arrangements have been made for the conveyance of passengers in omnibuses to and from the depot of the company. No. 280 Market street and Gray's Ferry Bridge; and as soon as the navigation of the river is obstructed with ice, this road can be opened at a few hours' notice for general travel and transportation, and notwithstanding the change of seasons, a rapid, safe and comfortable communication, daily maintained between this city and Baltimore.

A contract has been concluded by this company with the U. S. Post Office Department, for the transportation of one mail daily to and from this city to Baltimore, the compensation to be \$27,500 per annum, the company having agreed to run in connexion with the Washington and New York mails, and deliver the mail from this city daily in Baltimore, by half past 3 o'clock, P. M., and the southern mail in this city daily by 5 o'clock, P. M.

Having thus far finished our operations and successfully established a chain of rail road communication between this city and Baltimore, our security, and the common interests of the companies constituting the line, require that we should promptly and carefully consider the proper means of preventing any disturbance of the present harmony, now existing between the co-operating companies, or distraction of their united efforts for the accommodation of the public.

Extending as the line of communication does, through three different states, composed of three separate and independent corporations, and each incorporated by different Legislatures. Thus situated, sectional differences, conflicting interests, local jealousies, and the machinations of the designing and inimical, may engender disunion; or, so far interfere with our

arrangements, as to hinder, retard, or perhaps destroy the very objects of our creation. To guard against, and prevent such evils has been the subject of serious consideration with your board of directors.

The stockholders and directors of the two adjoining companies have made it the subject of their deliberations, and they have resolved on the union of the three companies, making the whole but one body corporate, and politic, their respective stocks, a common stock, and their separate interests a joint and common interest; for that purpose they have obtained from their different State Legislatures, the requisite enactments, and now only await the assent of the Stockholders of the company, to unite, and make their interests and efforts with ours but one in all permanent and indivisible.

Your directors consider such an union of the utmost importance to the interests of all concerned, as it would render the whole line subject to the direction of few instead of many, prevent intestine confusion and dissension, diminish the expense, as united there will be no necessity of the present large number of officers and agents, nor of each company separately purchasing and maintaining motive power, machinery, and cars, for the use of the respective roads, premising that the stockholders would cheerfully assent to such an arrangement. Your Directors have applied to the Legislature of this State, this session, and have obtained a law empowering this company to form a Union with the Wilmington and Susquehanna Railroad company of the State of Delaware, and the Baltimore and Port Deposit Railroad company, of the State of Maryland, under such terms and conditions as they shall agree on, and determine. Your sanction alone is wanted to effect immediately such an union, your early notice and consideration of the subject therefore is earnestly solicited.

In closing this report, your directors feel that that they would incur the imputations of injustice were they to pass unnoticed the industry, skill and perseverance of the Engineers, agents, and contractors employed in the execution of their duties. To their indefatigable exertions, the directors are indebted for the successful and speedy termination of their labors, to them is justly due the honor of having satisfactorily fulfilled their engagements and executed in a short space of time, an aggregate amount of labor almost incredible, and certainly unprecedented in America.

Herewith is annexed the annual report of the Treasurer of the company, all of which is respectfully submitted for your consideration.

In behalf of the Directors,

MATTHEW NEWKIRK, Pres't.

J. Wilson Wallace, Secretary.

U. S. Gazette.

### THIRD ANNUAL REPORT ON THE SANDY AND BEAVER CANAL COMPANY.

E. W. Gill, Chief Engineer.

August 1837.

The President and Directors of the Sandy and Beaver Canal Company, in compliance with their duty, present to the Stockholders their Third Annual Report.

In presenting this Report, we cannot suppress the expression of the regret we feel, in having on the first of April last, had to curtail operations which were in progress for the completion of the whole line of Canal, when owing, principally as we conceive, to the exceeding pressure of the money market, it was deemed advisable to adopt this course; since which time a small force has been continued in the employ of the Company, principally on the Eastern Division.

In curtailing operations the Board consider it due to those Contractors who surrendered their jobs, to state that with very few exceptions, they appreciated the difficulties to which this, with many other similar works, had been subjected, and compromised on terms deemed honorable to themselves and satisfactory to the Board.

Relying upon the accuracy of the Report of D. B. Douglass, the Board had supposed that funds sufficient for the completion of the work had been provided; but shortly after their last annual report, from the amount of the monthly estimates compared with the progress of the work, together with the increased prices of labour and provisions, fears began to be entertained that some additional funds would be necessary. Accordingly the Chief Engineer was requested after the letting in October, to make an estimate of the whole cost of the work at the contract prices, as early as his other business would permit.—Owing to the multiplicity of his duties this was not furnished the Board till January last—the amount considerably exceeded the estimate of Major Douglass.

As Philadelphia was depended upon in the outset for the principal amount of funds, and the chief part of the Stock being held there, the Report was forwarded to our commissioners in that city.

The difference between Major Douglass' estimate and E. H. Gill's may, in some measure, be accounted for by the advance in price of provisions, labor, materials, and the substantial manner in which the work is executed.

With the advice of the Stockholders in Philadelphia, a further sale of Stock has been ordered by the Board, an amount sufficient, it is believed, to complete the Canal, the certificates for which have been issued and forwarded to a committee in Philadelphia who have been appointed by the Board to dispose of them. The board have not been advised, by this committee what progress they have made, nor what the prospects are,

but are daily expecting to be informed upon this subject. A considerable amount in the expenditures has been caused by the purchase of Real Estate, for the sites of the Reservoirs on the summit, for the convenient and economical construction of the canal, and for hydraulic purposes—amounting in all to \$6,600 dollars.

The opinion expressed in the last annual report is reiterated, that when the canal shall be completed, retaining so much as may be necessary for its construction and the works connected therewith, the residue, including the donations from individuals, can be sold for a sum sufficient to cover the purchase money of the whole.

In the last annual report reference was made to a contemplated connection from Bolivar, the connecting point of the Sandy and Beaver with the Ohio Canal, to the mouth of the Auglaize, the connecting point of the Miami with the Wabash and Erie Canal. Since that time the Engineer designated by the State for examining this contemplated connection, has made a report recommending the continuation of the Wolhounding Canal from the Ohio Canal by the waters of the Maheigan to the town of Mansfield in the county of Richland, and from thence by Railroad to the mouth of the Auglaize.

At the last Session of the Legislature of Ohio, appropriations were made for extending the Walhounding branch to the Maheigan, there are therefore strong reasons to believe the work will be finally accomplished to the town of Mansfield, and from thence the connection completed by Railroad to the Auglaize, as the report of the Engineer is highly favorable for a cheap construction of a Road from Mansfield to the last named point.

Hence the Board congratulate the Stockholders, that the State of Ohio, has commenced the important work of forming an entire connection throughout the interior of the State by canal and railroad from the Ohio to the Miami, Wabash and Erie Canals, which, with the canals and railroads, now made and making by the States of Indiana and Illinois, will be extended to the Mississippi and the Southern extremity of Lake Michigan. Another circumstance equally important to the Stockholders of the Company, has transpired since the last annual meeting. By the action of Pennsylvania, it has been ascertained that a continued water communication can be formed across the Alleghany mountains at a reasonable expense. From the vast importance of such a connection it is apprehended the time is not distant when it will be accomplished.

The Board conceive these facts taken in connection with the rapid increase of trade on the Ohio Canal, as shown by the reports of the commissioners, to be upwards of \$20,000 in tolls annually, and the fact that more than three-fourths of the trade on that canal is south of the town of Masillon, and will in all proba-

bility pass through the Sandy and Beaver Canal, when it shall be finished, ought to unite the stockholders in using every exertion for the final completion of the work, and induce them to forego all minor considerations, not only on account of the public weal, but their own private interests. We then say, notwithstanding the many difficulties which have been encountered, and are still to be encountered, is there not great cause for congratulation? and shall we not, relying upon the continued favor of the giver of all good, persevere, until we have completed that work, to which our efforts have been and are still directed, and which when finished, will be a link in the great chain of artificial communication between the waters of the Atlantic and the great waters of the far west. Since the last annual meeting, the Board have had to lament, deeply, the loss of one of its members in the decease of Judge Christmas, an ardent and persevering friend, to whom the Company is much indebted for his zealous efforts in its behalf. The vacancy occasioned thereby has been filled by electing Dr. Horace Potter.

For a more particular account of the situation of the work entrusted to their care, the Board refer to the report of the Engineer, which is annexed, who has so fully comprised all important facts that little else is required in order to give a concise account of the proceedings, not only for the past year, but also for the whole period since active operations commenced on the line. We add that our confidence in his ability is unabated.

*Gentlemen,*—We now surrender to you the trust reposed in us for the year past, and we desire that your selection of Directors may be such that, with persevering and undivided efforts, they will carry on to completion the work which is the cause of your assembling this day.

By order of the Board,

BENJAMIN HANNA, President.

August 9, 1837.

#### Engineer's Report.

To the President and Directors of the Sandy and Beaver Canal Company.

GENTLEMEN,—The period having arrived which becomes my duty to lay before you, a synopsis of the condition and progress made in the construction of the work placed under my direction, I have the honor to present you the following report.

Since the date of my last annual report, the work progressed with spirit and energy, until checked by the paralyzing shock, which nearly all the improvements in our country have encountered, from the present very unexampled deranged state of the money market.

The excavation of the canal, and formation of the towing paths along the pools on the Eastern Division from New Lisbon to the Ohio River, a distance of about twenty-five miles are now completed, with the exceptions of portions of a few sections, not exceeding in all two

miles in extent. On the same division the masonry of nineteen locks is completed, and of several more nearly so; four dams are finished and four others require but the plank and ice guards laid, to render them complete; the entire amount of lock and dam masonry, now constructed on the division, exceeds thirty-one thousand perches, in addition to which, eleven thousand perches of stone partly cut, two hundred and fifty-three thousand feet of timber, and one hundred and seventy thousand feet of plank are prepared and delivered for the construction of locks and dams. Pains have been taken to render the towing paths and embankments, secure from abrasion or injury by ice freshets, to accomplish which, about fifty thousand cubic yards of slope and rip rap wall have been formed; the division could be rendered navigable, should the funds of the company permit, in fourteen months.

The summit or middle division is in a state of forwardness, twelve sections or five and a half miles of it are finished; 547,680 cubic yards of earth have been removed from the Western deep cut, and has cost the company \$70,237; there still remains to be taken out 150,000 cubic yards.

The tunnel in consequence of the great difficulty the contractors had to encounter, in procuring suitable miners conversant with that description of work has not progressed as rapidly as was anticipated, and it was found necessary last February to declare the contract abandoned. 4,400 cubic yards of rock have been removed from the drift of the tunnel, and about five hundred feet in extent are now completed: the excavation of the tunnel was contracted for at two dollars and thirty seven and one half cents per cubic yard, but the contractors having abandoned the work, the usual per centage was retained, in consequence of which the work done has cost the company but one dollar and ninety cents per cubic yard.

The reservoir mound on Cold Run is completed, excepting a small opening left for the water to pass through, till the land intended to be inundated, shall have been cleared. This piece of work has cost, including the iron conduit pipes, \$8,400, or \$3,340 less than my estimate. The West fork reservoir mound is two thirds done, and has already cost about \$27,000, and will require \$14,000, more to complete it. I originally estimated it to cost \$19,244, but the level of the summit was raised four and a half feet higher than the level adopted by Mr. Hage and myself, in 1834, (which was pointed out to us as the level fixed on by Maj. Douglass) causing a reduction in the cost of that of at least \$120,000. I deemed it advisable to increase the dimensions of the West fork reservoir, for the purpose of compensating for the loss of water, that the change in the summit level might produce; according to its present plan, it will flood five hundred acres of land, and contains upwards of 200,000,000

of cubic feet of water, or more than double the quantity it would have contained, if constructed on the original plan. In order to obtain the result, it was of course necessary to increase the length and height of the mound, which will satisfactorily explain the cause of the discrepancy between the estimated and actual cost. Nearly all the ground occupied by the reservoir has been cleared, the conduit pipes, and stop cocks are prepared, and nothing remains but the completion of the mound to render it ready for use.

Operations were commenced on nearly the whole of the Western division immediately after the letting in October last, and a very large amount of work would have been done this season, had not the difficulties heretofore alluded to occurred. At present about twelve miles of canal on that division, 3 locks and one dam are completed; in addition to which 615 perches of masonry are laid, 5800 perches of cut stone and backing. 69,000 feet of timber and 62,000 feet of plank for locks and dams are prepared and delivered on the ground. The entire amount of lock and dam masonry constructed on the division is 3,924 perches.

The heavy sections bordering on the Sandy Creek from Williams' Mill to Bolivar are, with one exception, either completed or nearly so, and much commendation is due to the contractors for their energy, perseverance and attention. If the dam and guard lock at Williams' mill were constructed, an expense not exceeding \$10,000 would complete those sections, and bring into operation the Company's very valuable water power at Bolivar. This power I have estimated in a former report, equal to work twenty pair of mill stones in a dry period. If to it is added the Company's mill privileges on the Eastern Division, viz: at Dams, 1, 4, 10 and 14, it will be found that they possess a water power by purchase, equal at least to work 33 pair of mill stones.

But little injury has thus far been sustained by any of the works on the line, although one or two heavy floods have occurred during the last winter and spring; the works being incomplete, and in some cases, from that circumstance, unavoidably exposed to the action of ice freshets, danger was to be apprehended, but the entire injury received from such causes is trifling; considerable injury, however, from wash has been sustained on the Western deep cut near Hanover, and the only method of effectually guarding against it, and at the same time prevent sediment from being carried into the deep cut, and avoid unnecessary expense, is to construct a ditch 10 feet wide on bottom, on the back or north side of the spoil bank, and conduct the waters that collect from Brown's Run and the other streams, in time of rain, through it till they reach the low ground at the western extremity of the cut where they can be

discharged without injury into the canal: a ditch of this description 3 feet deep, with the customary slopes on the sides, and a descent of 2 feet in every 3,100 feet, (which the present head race or ditch from the Run to the mill,) would discharge 9,100 cubic feet of water per minute, and can be constructed for \$2,200. These streams at their highest stage, will not afford over 4,000 cubic feet of water per minute. I had early in the spring given directions to have a ditch of the above description commenced and completed: the workmen, you are aware, were stopped by a writ of injunction, served at the instance of the owner of a small tract of land through which the ditch was located,\* and as the matter has not yet been finally adjudicated, and he being made responsible for the injury should the injunction be removed, no other measures to prevent the wash, have been resorted to. The method suggested by the complainant for discharging the water into the canal, is to construct a slope wall or paved way, on the slope of the canal bank at or near the mouth of Brown's Run, and pass the water over it into the canal: the cutting or depth of excavation at that point, is upwards of 30 feet, and to discharge 4,000 cubic feet of water per minute, into the canal, down a descent of that description, acquiring as it would by gravitation a velocity of nearly forty feet per second, is preposterous in the extreme; independent of numerous other objections, it would be highly dangerous, if not impossible, during floods for boats to pass it. This objection might be surmounted, by excavating a basin and discharging the water into it 60 or 100 feet back from the canal. A device of this description, constructed on the most economical plan, would cost at least \$5,000. The water of those streams, you are aware, prior to the excavation of the canal, was the property of the owners of the Hanover Mill, and was there used, and constituted about one-half of the entire water power; in conducting it, as contemplated, along the back of the spoil bank, it will not be diverted from the mill, so that no claim for damages of that description, would be encountered; but if it is thrown into the canal at Brown's Run, as heretofore described, the mill will be rendered useless and the company subjected to claims for damages. Another reason for conveying the water along the back and keeping it out of the deep cut is, that it will reduce the cost of excavating the canal, at least \$4,000.

Last season much delay was experienced in consequence of not being able to have a sufficient quantity of hydraulic cement ground, to supply the wants of the contractors. In order to prevent a recurrence of a similar nature, several additional mills were, during the last winter, rented and fitted up for the purpose; and there is now ground and on hand about 76,000 bushels of this article, and 35,000 bushels burned and ready for

grinding. Although the stone from which it is manufactured, is abundant, and of the finest quality on the Eastern and Middle divisions of the line, thus far, notwithstanding strict examinations have been made, no quarry of hydraulic limestone worth opening, has been discovered on the Western division. This circumstance, and being sensible of the vast importance of it in the construction of canal locks, led me to make numerous experiments, for the purpose of arriving at a substitute, and I am pleased to state the result of my experiments is exceedingly satisfactory. The ingredients used in the formation of the artificial cement, are cheap and abundant on the Western division. A contract has been entered into for manufacturing it, and a large amount delivered at twenty-five cents per bushel: the article proves fully equal to the best natural hydraulic cement. There are also prepared and on hand about \$9,000 worth of iron and iron work, such as lock irons, reservoir pipes, stop cocks, &c.

The whole amount expended for canal construction, independent of real estate, damages or incidental expenditures, is \$823,000. \$383,000 of which have been applied on the Eastern division, \$259,805 on the Middle, and the residue on the Western division. Settlements having been effected with nearly all the contractors, when it was found necessary to curtail operations, the company at present is but slightly indebted for work done. The aggregate amount of contractors claims unsettled, including the retained per centage, will not exceed \$25,000. The force employed on the line is at present reduced to 220 men, 170 of whom are on the Eastern division. Most of the contractors hold themselves in readiness to commence operations, as soon as the state of the company's finances will permit.

The partial suspension of the work has caused me to diminish the engineer corps, and consequently part with many gentlemen of skill and ability. The Eastern division is under the direction of James Bradley, Assistant Engineer, aided by Washington Gill, Junior Assistant; B. S. Dibble, target bearer, and William Smith, axeman. The Western division under the superintendence of Roger Morledge, Assistant Engineer, assisted by Lot Dixon and P. Hoagland, Junior Assistants; J. R. Straughn, target bearer, and Hugh Miller, axeman. The masonry is under the charge of Walter Scott, and the carpentry, L. Reynolds, and J. Counover: to all these gentlemen I am indebted for their prompt attention to the duties assigned them.

In closing this report, I would respectfully call your attention to that portion of the Eastern division, extending from the town of New Lisbon to the Ohio River. \$356,000 have been expended on it, and \$420,000 will render it navigable and complete. New Lisbon has a population of about 2,000 inhabitants; it contains

twenty-three stores, independent of shops and groceries, and four daily lines of stages pass through it: numerous thriving villages are contiguous, and the land in its vicinity is rich and fertile; and I feel convinced it is the interest of the company to complete, without delay, thence to the Ohio River, feeling satisfied it would afford business sufficient to pay the interest on the expenditure.

All of which is respectfully submitted.

E. H. GILL, *Chief Engineer.*  
*Engineer's Office, Sandy and*  
*Beaver Canal, Aug. 7, 1837.*

#### MINERAL WEALTH OF MISSOURI.

Each successive day sheds new light upon the vast resources of our country. By no other perhaps, it is excelled in the amount and variety of its mineral productions. Among the States most remarkable for their metallic wealth, Missouri, we believe, occupies the first place. Not to speak of the famous iron mountain, its mines of lead, copper, etc., are unsurpassed in extent and quality. Their development has been trifling as yet compared to that of which they are susceptible. Some of them indeed have been worked for nearly a century, particularly those of lead. This is the case especially with *Mine la Motte*, which has yielded, from a distant period, large quantities of that metal, and has been a source of great prosperity to the surrounding country, notwithstanding the inefficient manner in which it was worked. This most extensive and valuable property has been recently sold by a decree of court, with the view of distributing the proceeds among the respective heirs. It had been previously rented for the annual sum of 6,000 dollars to parties by whom it was worked in a careless and clumsy manner. We are pleased to learn that it has now passed into the hands of an intelligent and enterprising company, embracing, with three others, Dr. Linn, the worthy Senator from Missouri, who are determined to do full justice to its resources. We are glad to learn this, not only on their account, but for the interest of the country, as we have understood from an authentic source, that the most valuable of its ores have been neglected from an ignorance of their nature and value. This was particularly the case with the carbonate of lead, which is found there in abundance. Large quantities of rich pyritous ores of copper were also thrown away, because of their not containing lead, the only metal which was searched for. A valuable ore of cobalt also is said to have been obtained from this mine by Professor Froost of Nashville. These general facts are confirmed by the statements of the commissioners appointed by the court, who sum up their observations with the remark, "that they are of opinion, founded on experience and observation, that the mineral resources consisting of lead and copper, within the said tract of land, are of immense value."

The *Mine la Motte* properly comprises

about 24,000 acres, situated in the southern part of Missouri, in Madison county, about twenty-five miles from the Mississippi river, in the midst of a healthy and well peopled country. It is in the immediate route of a contemplated Railroad between the northern and southern extremes of the State, and lies about eighteen miles from the celebrated iron mountain, in the adjoining county of Washington. One of the branches of the river St. Francis runs through the tract, which is also intersected, in various directions, by several minor streams of sufficient magnitude to propel mills or any requisite machinery. The soil throughout is fair; and at least one-third of it of a very superior quality; the whole being plentifully furnished with timber, and well supplied with unfailing springs; thus offering every facility for the prosecution of mining operations. We have been induced to offer a brief description of this important property to the public, as it presents facts and suggests considerations of general interest. We are informed that it is about to be revisited by Mr. Clemson, the eminent mineralogist and geologist, whose examination of the property, last summer, resulted in an impression highly flattering, and who goes out a second time for the purpose of making more comprehensive and minute researches, with reference to the prosecution of mining operations of the most approved kind, and upon a scale commensurate with the magnitude of its resources. We wish these gentlemen all success in their enlightened and public spirited enterprise.—*Globe.*

#### OHIO CANALS.

The Ohio canal has been navigable from the 20th April to the 1st December. The amount of tolls for 1837, is \$293,428 79. The receipts for 1836, were \$211,823 32, showing an increase in one year of \$81,605 47. The Ohio canal is 310 miles long, reaching from Cleveland on Lake Erie, to the Ohio River. This canal has been open part of the present month, and a large quantity of produce carried down to be shipped from New Orleans. Ohio has eight canals completed, or in a state of forwardness, the aggregate length amounting to 812 miles.—*N. Y. Express.*

#### REEFING TOPSAILS.

We learn from the *Zion's Herald* that Captain John Wade, recently of this city, but now of New Orleans, has hit upon a simple contrivance, by which all the sails of a vessel can be reefed in a speedy and perfect manner, while standing on the deck. He had just taken out a patent for it at Washington.—*U. S. Gazette.*

The attention of the public is called particularly to the proceedings of a meeting held in this town last evening. The importance of the subjects embraced in the resolutions is great, and indeed involves the immediate prosperity of Mil-

waukee, and we would earnestly call the attention of Congress to the subject. The scarcity of harbors on Lake Michigan, and the great natural advantages of the bay and harbor of Milwaukee, are strong arguments in favour of the project. The number of vessels stranded and utterly lost on our shores for the want of harbors, are wretched monuments of the necessity of doing something.

The necessity of a good road from Chicago to Green Bay, passing through Milwaukee, is so obvious as not to admit of demonstration.

The division of the Territory is also a matter of importance. The subject is now before Congress, and all we have to say about the matter is that the wishes of the people, so far as we have been able to learn them, coincide with the views expressed in the resolutions.—*Milwaukee Adv.*

The Northern Railroad in Michigan will commence its eastern termination at Fort Huron, on the Lake of the same name, and pass through the heart of the State to Grand River. This will be a continuation of the great Western Road through Canada, commencing at the head of Lake Ontario and ending at the foot of Lake Huron. The three Railroads through Michigan will be the one above named, the middle from Detroit to St. Joseph, and the southern from Monroe to New Buffalo. Intersected by such channels of trade this young member of the confederacy will enjoy to the fullest extent the benefits arising from the fertility of her soil, and industry of her population.—*Baltimore American.*

#### TOLEDO AND MICHIGAN CITY RAILROAD.

The entire survey of this road is now completed, and the part from Michigan City to Laporte, we are informed, is in the progress of construction. Its whole length is 178 miles; 64 in Ohio, and 114 in Indiana. The Ohio line has been run. The western country is probably the first in the world for Railroads; and the resources of the above described section of the country richly deserve such a communication.—*Chicago Citizen.*

Volume Six will be completed as speedily as possible. The next, or Volume for 1838, will be published in a more convenient form for preservation.

\*\* Subscribers who desire to be supplied with missing numbers, will do well to apply for them soon. We shall always take pleasure in furnishing them if we have them to spare.

Particular attention will be given to the procuring of all kinds of Instruments required by Engineers.—Orders must be accompanied with the necessary funds or city acceptances.

## AGENCY.

The Subscriber offers his services as Agent, to procure Machinery for Mills, Steam Engines, Locomotives, Printing Machines, Presses, Types and Plates.

He will give prompt attention to all orders entrusted to him for execution; and pledges himself to those who may employ him, that no effort on his part shall be wanting to procure the best articles to be had in the city—and to give satisfaction.

He will also employ Millwrights and Engineers, to erect Mills, and put the Engines and Machinery in operation.

Orders accompanied with the necessary funds, or satisfactory city acceptances, should be addressed to D. K. MINOR, 39 Wall-st. N. Y.

## LOUISVILLE, CINCINNATI, AND CHARLESTON RAILROAD.

**NOTICE TO CONTRACTORS.**—Sealed Proposals will be received at the Office of the Company in Columbia, S. C., until the 15th day of February next, for the graduation and masonry of that portion of the Road from Columbia to the crossing of the Congaree River, in the vicinity of McCord's Ferry, being 25 miles in extent.

Also, for the construction of a Bridge of 400 feet in length, on the Congaree River, to be built on stone piers and abutments, for which there are suitable quarries in the neighborhood.

The plans and profiles of the line will be ready for inspection at the Office of the Resident Engineer, in Columbia, S. C., after the 10th day of February.

So soon as the surveys for location, now in progress, are completed, that part of the Road extending from McCord's Ferry to the Charleston and Hamburg Railroad, at Branchville, will be put under contract, of which due notice will be given.

WM. GIBBS Mc NEILL,  
Chief Engineer.

The Railroad Journal, N. Y. Courier & Enquirer, N. York; Providence Journal, Providence, R. I.; Atlas, Boston; Philadelphia Enquirer, Philadelphia; will publish the above notice 6 times, send a copy of the paper to the Office in Charleston, S. C., and a certified copy of their account for payment.

Jan. 12

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## NEW ARRANGEMENT.

ROPE FOR INCLINED PLANES OF RAILROADS.

We the subscribers have formed a co-partnership under the style and firm of Folger & Coleman, for the manufacturing and selling of Ropes for inclined planes of railroads, and for other uses, offer to supply ropes for inclined planes, of any length required without splice, at short notice, the manufacturing of cordage, heretofore carried on by S. S. Durfee & Co., will be done by the new firm, the same superintendent and machinery are employed by the new firm that were employed by S. S. Durfee & Co. All orders will be properly attended to, and ropes will be shipped to any port in the United States.

12th month, 12th, 1836. Hudson, Columbia County, State of New-York.

ROBT. C. FOLGER.  
GEORGE COLEMAN.

## AMES' CELEBRATED SHOVELS, SPADES, &amp;c.

200 dozens Ames' superior back-strap shovels.  
150 do. do. do. plain do.  
150 do. do. do. cast-steel Shovels & Spades  
150 do. do. Gold-mining Shovels.  
60 do. do. plated Spades.  
50 do. do. socket Shovels and Spades.  
Together with Pick Axes, Churn Drills, and Crow Bars (steel pointed), manufactured from Salisbury refined iron—for sale by the manufacturing agents,

WITHERELL, AMES & CO.

No. 2 Liberty street, New-York.

BACKUS, AMES & CO.

No. 9 State street, Albany.

N. B.—Also furnished to order, Shapes of every description, made from Salisbury refined Iron. v4-tf

## MACHINE WORKS OF ROGERS,

KETCHUM and GROSVENOR, Paterson, New-Jersey. The undersigned receive orders for the following articles, manufactured by them, of the most superior description in every particular. Their works being extensive, and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and dispatch.

## RAILROAD WORK.

Locomotive Steam-Engines and Tenders; Driving and other Locomotive Wheels, Axles, Springs, and Flange Tires; Car Wheels of cast iron, from a variety of patterns, and Chills; Car Wheels of cast iron, with wrought Tires; Axles of best American refined iron; Springs; Boxes and Bolts for Cars.

COTTON, WOOL, & FLAX MACHINERY. Of all descriptions and of the most improved patterns, Style, and Workmanship.

Mill Geering and Millwright work generally; Hydraulic and other Presses; Press Screws; Callenders; Lathes and Tools of all kinds; Iron and Brass Castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR.

Paterson, N. J. or 60 Wall-st. New-York 51tf

## FRAME BRIDGES.

The undersigned, General Agent of Col. S. H. LONG, to build Bridges, or vent the right to others to build on his Patent Plan, would respectfully inform Railroad and Bridge Corporations, that he is prepared to make contracts to build, and furnish all materials for superstructures of the kind, in any part of the United States, (Maryland excepted.)

Bridges on the above plan are to be seen at the following localities, viz. On the main road leading from Baltimore to Washington; two miles from the former place. Across the Metawamkeag river on the Military road in Maine. On the national road in Illinois at sundry points. On the Baltimore and Susquehanna Railroad at three points. On the Hudson and Paterson Railroad in two places. On the Boston and Worcester Railroad, at several points. On the Boston and Providence Railroad, at sundry points. Across the Contoocook river at Henniker, N. H. Across the Souhegan river, at Milford, N. H. Across the Connecticut river, at Hancoc, N. H. Across the Androscoggin river, at Turner Centre, Maine. Across the Kennebec river, at Waterville, Maine. Across the Genesee river, at Squakiehill, Mount Morris, N. Y. Across the White River, at Hartford, Vt. Across the Connecticut River at Lebanon, N. H. Across the mouth of the Broken Straw Creek, Penn. Across the mouth of the Cataragus Creek, N. Y. A Railroad Bridge diagonally across the Erie Canal, in the City of Rochester, N. Y. A Railroad Bridge at Upper Still Water, Orono, Maine. This Bridge is 500 feet in length; one of the spans is over 200 feet. It is probably the firmest wooden bridge ever built in America.

Notwithstanding his present engagements to build between twenty and thirty Railroad Bridges, and several common bridges, several of which are now in progress of construction, the subscriber will promptly attend to business of the kind to much greater extent and on liberal terms.

MOSES LONG.

Rochester, Jan. 19th, 1837. 4-y

## STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads,

No. 264 Elizabeth street, near Bleeker street,

NEW-YORK.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on the New-York and Harlem Railroad, now in operation.

## ROACH &amp; WARNER,

Manufacturers of OPTICAL MATHEMATICAL and PHILOSOPHICAL INSTRUMENTS, 293 Broadway, New-York, will keep constantly on hand a large and general assortment of Instruments in their line.

Wholesale Dealers and Country Merchants supplied with SURVEYING COMPASSES, BAROMETERS, THERMOMETERS, &c. &c. of their own manufacture, warranted accurate, and at lower prices than can be had at any other establishment.

Instruments made to order and repaired.

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## RAILWAY IRON, LOCOMOTIVES, &amp;c. &amp;c.

THE subscribers offer the following articles for sale:

Railway Iron, flat bars, with countersunk holes and milled joints,

250 tons 2 by 1, 15 ft in length, weighing 4 1/2 lbs.

280 " 2 " 1, " " " 3 1/2 " "

70 " 1 1/2 " 1, " " " 2 1/2 " "

80 " 1 1/2 " 1, " " " 1 1/2 " "

90 " 1 " 1/2, " " " 1 " "

with Spikes and Splicing Plates adapted thereto. To be sold free of duty to State governments, or incorporated companies.

Orders for Pennsylvania Boiler Iron executed. Rail Road Car and Locomotive Engine Tires, wrought and turned or unturned, ready to be fitted on the wheels, viz. 30, 33, 36, 42, 44, 54, and 60 inches diameter.

E. V. Patent Chain Cable Bolts for Railway Car axles, in lengths of 12 feet 6 inches, to 13 feet 2 1/2, 3, 3 1/2, 3 3/4, 3 1/2, and 5 1/2 inches diameter.

Chains for Inclined Planes, short and stay links, manufactured from the E. V. Cable Bolts, and proved at the greatest strain.

India Rubber Rope for Inclined Planes, made from New Zealand Wax.

Also, Patent Hemp Cordage for Inclined Planes, and Canal Towing Lines.

Patent Felt for placing between the iron chair and stone block of Edge Railways.

Every description of Railway Iron, as well as Locomotive Engines, imported at the shortest notice, by the agency of one of our partners, who resides in England for this purpose.

A highly respectable American Engineer resides in England for the purpose of inspecting all Locomotives, Machinery, Railway Iron, &c. ordered through us.

A. & G. RALSTEN & CO.,  
Philadelphia, No. 4 South Front-st.

28 tf

## ARCHIMEDES WORKS.

(100 North Moore-street, N. Y.)

THE undersigned beg leave to inform the proprietors of Rail Roads, that they are prepared to furnish all kinds of Machinery for Rail Roads, Locomotive Engines of any size, Car Wheels, such as are now in successful operation on the Camden and Amboy Rail Road, none of which have failed. Castings of all kinds, Wheels, Axles and Boxes, furnished at the shortest notice.

H. R. DUNHAM & CO.

New York, February 12th, 1836. 4-ytf

## PATENT RAILROAD, SHIP AND BOAT SPIKES.

The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation, and now almost universal use in the United States, (as well as England, where the subscriber obtained a patent) are found superior to any yet ever offered in market.

Railroad companies may be supplied with Spikes having countersunk heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above-named factory—for which purpose they are found invaluable, as their adhesion is more than double any common Spikes made by the hammer.

All orders directed to the Agent, Troy, N. Y. will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y. July, 1831.

Spikes are kept for sale, at factory prices, by I & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 222 Water-street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing season to keep pace with the daily increasing demand for his Spikes.

1123am

H. BURDEN.

G. Mitchell, Printer, 263 Bowery, N. Y.